

## **1. Amendments to the Claims:**

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of Claims:**

1. (Currently Amended) A ballast ~~(10)~~ ~~receiving line voltage~~, comprising:
  - an inverter output stage ~~(30)~~; and
  - a power factor correction input stage ~~(20)~~ ~~receiving said~~ configured to receive a line voltage and being in electrical communication with said inverter output stage ~~(30)~~ to apply a regulated DC voltage to said inverter output stage ~~(30)~~, said regulated DC voltage being a function of said line voltage, said power factor correction input stage ~~(20)~~ including comprising:
    - a power factor correction integrated circuit ~~(26)~~, and a line voltage sensing circuit ~~(22)~~ in electrical communication with said power factor correction integrated circuit ~~(26)~~ to apply a clamped rectified voltage to said power factor correction integrated circuit ~~(26)~~, wherein said clamped rectified voltage is a function of a load being applied by said inverter output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~.
2. (Currently Amended) The ballast ~~(10)~~ of claim 1, wherein the clamped rectified voltage and the load being applied by said inverter output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~ are proportional.
3. (Currently Amended) The ballast ~~(10)~~ of claim 1, further comprising:
  - a dimming interface ~~(40)~~ in electrical communication with said power factor correction input stage ~~(20)~~ and configured to communicate a dimming level signal as a function of an external ballast control signal to said power factor correction input stage ~~(20)~~, wherein the dimming level signal is indicative of the load being applied by said

inverter output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~.

4. (Currently Amended) The ballast ~~(10)~~ of claim 1, wherein said inverter output stage ~~(30)~~ is in electrical communication with said power factor correction input stage ~~(20)~~ and configured to communicate a load feedback signal to said power factor correction input stage ~~(20)~~; and wherein the load feedback signal is indicative of the load being applied by said inverter output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~.

5. (Currently Amended) The ballast ~~(10)~~ of claim 1, wherein said line voltage sensing circuit ~~(22)~~ includescomprises: a voltage rectifier ~~(23)~~ operable to generate a rectified voltage as a function of the line voltage; a THD controller ~~(25)~~ operable to generate a clamping voltage as a function of the load being applied by said inverter output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~; and a voltage divider ~~(24)~~ in electrical communication with said voltage rectifier ~~(23)~~ and said THD controller ~~(25)~~ to generate the clamped rectified voltage as a function of the rectified voltage and the clamping voltage.

6. (Currently Amended) The ballast ~~(10)~~ of claim 5, wherein said voltage divider ~~(24)~~ includescomprises a dividing node ~~(N1)~~; and wherein said THD controller ~~(25)~~ includescomprises means for applying the clamping voltage to said dividing ~~(N1)~~ node of said voltage divider ~~(24)~~ as a function of the line voltage.

7. (Currently Amended) The ballast ~~(10)~~ of claim 6, wherein the clamping voltage and the line voltage are inversely proportional.

8. (Currently Amended) The ballast ~~(10)~~ of claim 5, further comprising: a dimming interface ~~(40)~~ in electrical communication with said power factor correction input stage ~~(20)~~ to communicate a dimming level signal to said power factor correction input stage ~~(20)~~, the dimming level signal being indicative of the load being applied by said inverter

output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~; and wherein said THD controller ~~(25)~~ ~~includes~~ comprises means for generating the clamping voltage as a function of the dimming level signal.

9. (Currently Amended) The ballast ~~(10)~~ of claim 5, wherein said inverter output stage ~~(30)~~ is in electrical communication with said power factor correction input stage ~~(20)~~ to communicate a load feedback signal to said power factor correction input stage ~~(20)~~; wherein the load feedback signal being indicative of the load being applied by said inverter output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~; and wherein said THD controller ~~(25)~~ ~~includes~~ comprises means for generating the clamping voltage as a function of the load feedback signal.

10. (Currently Amended) The ballast ~~(10)~~ of claim 5, where said power factor correction integrated circuit ~~(26)~~ including a multiplier input pin ~~(MIP)~~; and wherein said voltage divider ~~(25)~~ ~~includes~~ comprises a dividing node ~~(N2)~~ in electrical communication with said multiplier pin ~~(MIP)~~ to apply the clamped rectified voltage to said power factor correction integrated circuit ~~(26)~~.

11. (Currently Amended) A power factor correction input stage ~~(20)~~ ~~receiving line voltage~~, comprising:

- a power factor correction integrated circuit ~~(26)~~;
- a line voltage sensing circuit ~~(22)~~ in electrical communication with said power factor correction integrated circuit ~~(26)~~ ~~and configured~~ to apply a clamped rectified voltage as a function of ~~said a~~ line voltage to said power factor correction integrated circuit ~~(26)~~, wherein the clamped rectified voltage is a function of a load being applied by to said power factor correction integrated circuit ~~(26)~~.

12. (Currently Amended) The power factor correction input stage ~~(20)~~ of claim 11, wherein the clamped rectified voltage and the load being applied to said power factor

correction integrated circuit~~(26)~~ are proportional.

13. (Currently Amended) The power factor correction input stage ~~(20)~~ of claim 11, wherein said line voltage sensing circuit ~~(22)~~ includescomprises: a voltage rectifier~~(23)~~ operable to generate a rectified voltage as a function of the line voltage; a THD controller ~~(25)~~ operable to generate a clamping voltage as a function of the load being applied to said power factor correction integrated circuit~~(26)~~; and a voltage divider ~~(24)~~ in electrical communication with said voltage rectifier ~~(23)~~ and said THD controller~~(25)~~ to generate the clamped rectified voltage as a function of the rectified voltage and the clamping voltage.

14. (Currently Amended) The power factor correction input stage~~(20)~~ of claim 13, wherein said voltage divider (24) includescomprises a dividing node~~(N1)~~; and wherein said TED controller ~~(25)~~ includescomprises means for applying the clamping voltage to said dividing ~~(N1)~~ node of said voltage divider ~~(24)~~ as a function of the line voltage.

15. (Currently Amended) The power factor correction input stage ~~(20)~~ of claim 11, wherein the clamping voltage and the line voltage are inversely proportional.

16. (Currently Amended) The power factor correction input stage~~(20)~~ of claim 15, where said power factor correction integrated circuit ~~(26)~~ including a multiplier input pin ~~(MIP)~~; and wherein said voltage divider ~~(25)~~ includescomprises a dividing node ~~(N2)~~ in electrical communication with said multiplier pin ~~(MIP)~~ to apply the clamped rectified voltage to said power factor correction integrated circuit~~(26)~~.

17. (Currently Amended) A ballast ~~(10)~~ receiving a line voltage, comprising:  
an inverter output stage ~~(30)~~; and  
a power factor correction input stage ~~(20)~~ configured to receive a line voltage in  
electrical communication with said inverter output stage ~~(30)~~ and configured to apply a

regulated DC voltage as a function of said line voltage to said inverter output stage ~~(30)~~, said power factor correction input stage ~~(20)~~ including a power factor correction integrated circuit ~~(26)~~, and means for applying a clamped rectified voltage to said power factor correction integrated circuit ~~(26)~~, wherein said clamped rectified voltage is a function of a load being applied by said inverter output stage ~~(30)~~ to said power factor correction integrated circuit ~~(26)~~.

18. (Currently Amended) A power factor correction input stage (20) ~~receiving line voltage~~, comprising:

a power factor correction integrated circuit ~~(26)~~;

means for applying a clamped rectified voltage as a function of ~~said~~ line voltage to said power factor correction integrated circuit ~~(26)~~, wherein the clamped rectified voltage is a function of a load being applied by to said power factor correction integrated circuit ~~(26)~~.